## XXX. *Observations on the* Esula Major Germanica *of Lobel.*

*By* Edward Forster, *Esq., V.P.L.S. F.R.S.*

Read November 1st, 1836.

THE rediscovery of plants mentioned by ancient authors as natives of this kingdom, but long since forgotten, must be interesting to all who delight in herbarization. It will be well, therefore, to call the attention of the Linnean Society to the fact that the *Euphorbia* lately discovered near Bath by Mr. E. Simms and Dr. Heneage Gibbes, and brought into notice by Mr. Babington, was found in Great Britain, two hundred and sixty years ago, in the same neighbourhood, and probably by the side of the very same wood where it was observed by the botanists above mentioned.

In July 1634, Thomas Johnson, afterwards Lieutenant-Colonel of King Charles's forces and Honorary Doctor of Medicine in the University of Oxford, author of many works on natural history, but best known by his excellent edition of Gerard's Herbal, accompanied by several medical friends from London, undertook a botanical excursion to Bath and Bristol, and from thence to Salisbury, Southampton and Chichester, meeting the party at Marlborough, as he had already been two months at Bath in attendance on a female patient. On his return he published the result of their twelve days' peregrination under the title of *Mercurius Botanicus*. In this little book he records *Esula major Germanica*, Ad. Lob., Ger.; *Tithymalus palustris fruticosus*, Cam., Bauh.; Quack-salvers' Turbith; Water Spurge. "By a woodside, some mile south of Bathe." This is copied by Howe in his *Phytologia Britannica*, 1650. In Merrett's *Pinax Rerum Britannicarum* it occurs thus: "By a woodside a mile from Bath, and betwixt Guildford and Godliman, near Compton in a wheatfield by the side of a moor, near Mr. Yalden's house," which is inserted by Dillenius in the *Indiculus Plantarum dubiarum*, at the end of his edition of Ray's Synopsis, 1724. The Bath station is nearly exact as to the places where it now grows, one being south of Bath, the other not far otherwise.

Johnson, however, was not the original discoverer of this rare plant, for Lobel, or more properly Matthias De L'Obel, who was Botanist to King James the First, and had the care of Lord Zouch's garden at Hackney, in his *Stirpium Historia*, mentions *Esula major Germanica, Turbith nigrum et adulterinum*: "Angliæ frequentissima in sylva D. Joannis Coltes, prope Bathoniam;" properly translated by Parkinson in his Herbal, "In a wood belonging to Mr. John Coltes, nigh unto Bath, very plentifully," for the construction of the sentence will not admit of its meaning "frequently found in England." It is very desirable that search be made between Guildford and Godalming, a situation mentioned only in Merrett's bungling *Pinax*, as Ray, perhaps rather too severely, denominates his book.

There can be no doubt of the Spurge found "some mile south of Bathe" being the *Esula major*; for it is hardly possible to suppose that these "*socii itinerantes*," being eight members of the Apothecaries' Company, could be ignorant of a plant which the Quack-salvers were accused of substituting for the real Turbith. It is to be observed, that Linnæus makes *Esula major* a synonym of his *Euphorbia palustris*, and I think the Bath plant recently found ought to be so considered. In this I am obliged to differ from my friend Babington, who has much merit in elucidating this plant, first in his *Flora Bathoniensis*, under the name of *E. epithymoides*; since in the Supplement to English Botany, and in his useful Observations on several new and imperfectly understood Plants in the Linnean Transactions, referring it to *Euphorbia pilosa*; in which he is perfectly justified, for it corresponds exactly with the specimen received by Linnæus from Gmelin, so named in the herbarium, but which, I believe, is not distinct from his *E. palustris*, thus described in *Fl. Suecica*:

"*Radix* perennis. *Caulis* annuus. *Folia* lanceolata, alterna. *Umbella* universalis multifida, polyphylla; partiales trifidæ, triphyllæ; reliquæ dichotomæ diphyllæ. *Involucra* et *involucella* ovata. *Fructus* verrucosus. *Flores* primores masculi pentapetali abortientes; secundarii hermaphroditi tetrapetali. *Petala* integra." In the *Species Plantarum*, *Euphorbia pilosa*, a native of Siberia, is introduced and described: "Habitus exacte *E. palustris*, ut facile pro eadem sumeretur, eodemque tempore floret, paulo tamen major. *Folia* lato-lanceolata, alterna utrinque vix manifeste pilosa, apice ita tenuis-

sime serrata, ut vix observentur serraturæ. *Umbellæ* cum umbellulis lateralibus ita coacervatæ, ut primaria difficilius eruatur, luteæ petalis et involucris. *Flores* primarii masculi pentapetali; reliqui hermaphroditi tetrapetali: petalis transverse ovalibus. *Fructus* verrucosi et pilis albis subtilissimis adspersi. *Rami* steriles ex alis foliorum inferiorum, ut ex summis alis pedunculi umbelluliferi." In these two descriptions there is little difference, except that in *E. palustris* nothing is said of the leaves being hairy or serrated. In *Hortus Cliffortianus*, Linnæus joins to *E. palustris*, *Tithymalus palustris villosus mollior erectus* and *Tithymalus nemorosus villosus mollior*, Barr. Rar. Whether these belong to it or not, it proves that he did not consider the smoothness of the leaves essential. Perhaps the greatest difference is in one being placed in the division of quinquefid umbels and the other among the multifid; but this will not hold good, for "Umbellæ cum umbellulis lateralibus ita coarcervatæ ut primaria difficilius eruatur" might with great accuracy be applied to *Euphorbia amygdaloides*, our common Wood Spurge, which is placed in the multifid division as well as *E. palustris*, so that *E. pilosa* must come into the same division as that species.

On the 2nd of August last I visited the station nearest to Bath, and though the husbandman had been before me with his hook, I found enough left for examination, and I have a living plant received from thence in a former year. After the most careful attention I can give to the subject, I am thoroughly convinced that the plant now found is the *Euphorbia palustris* of Linnæus and most continental botanists, and that it is also the "*Euphorbia* foliis alternis, ex ovali lanceolatis umbellis diphyllis subtrifloris, capsulis erectis muricatis, caule simplici" of Gmelin in his *Flora Sibirica*, vol. ii. 227. t. 93. "Inter Irtim et Jeniseam fluvios ubique frequens est," which Linnæus has adopted as *E. pilosa*. In the Linnæan Herbarium the specimen called *E. palustris* has glabrous leaves, yet still I think the rudiments of hairs may be traced on some of them. In that marked *E. pilosa*, "Jenise," and therefore evidently sent to Linnæus from the latter of the rivers mentioned by Gmelin, the hairs are very visible and by no means "vix manifeste." In the Banksian Herbarium there is a specimen named *Euphorbia palustris*, "In Austria alpina, *Jacq.*," which agrees exactly with the *Euphorbia pilosa* of the Linnæan Herbarium, and with our Bath plant in having the leaves manifestly hairy on the margins and

underside, and sometimes on the upper surface; and in Clifford's Herbarium in the same valuable collection, there is a similar specimen, marked also *E. palustris*. The *E. pilosa* of the Banksian Herbarium is a totally different plant, which is accounted for by Dryander in a MS. note in the *Species Plantarum*: "Planta Sibirica Linn. Herb. exacte refert figuram Gmelini, distincta a planta Europæ Australis." My specimens from Bath differ in no respect that I can discover from the Banksian specimens, or from the Siberian one preserved by Linnæus under the name of *E. pilosa*, yet differing from his description of that plant in the manifest hairs, as well as in the serratures, which are frequently very visible, except towards the base; sometimes, indeed, they are inconspicuous from the doubling of the edge of the leaf, but I believe they always exist. In my living plant the leaves on the barren shoots are becoming glabrous; these shoots, aptly described by Haller as loving to rise superior to the umbel, are very remarkable, issuing not only from the stem, but actually from the summits of the umbels, as described in the above quotation from the *Species Plantarum*. These are evidently intended in the figures of the ancient authors, which would otherwise represent the plant very badly; as it is, they are by no means to be praised.

I venture to suggest the following character and synonyms.

### Euphorbia palustris.

E. umbella subquinquefida: trifida: bifida: bracteis ellipticis glabris, foliis lato-lanceolatis subpilosis serrulatis, capsulis verrucosis pilosis.

E. palustris. *Linn. Sp. Pl.* 662? *Jacq. Misc. tom.* ii. 314. *Host. Syn. Aust.* 266. *Banks. et Cliff. Herb.*

E. pilosa. *Linn. Sp. Pl.* 659. *Bab. in Linn. Trans. vol.* xvii. 460. *Engl. Bot. Suppl. vol.* ii. 2787. *Roep. En. Euph.* 63. *Bot. Gall.* 414. *Linn. Herb.*

E. pilosa β. *Hook. Br. Fl. ed.* 3. 388.

E. epithymoides. *Bab. Fl. Bath.* 44. (non *Linn.*).

E. i. *Gmel. Fl. Sib. vol.* ii. 226. *t.* 93.

Tithymalus, 1054. *Hall. Helv. vol.* ii. 11.

Esula major. *Dod. Purg.* 158. *Dalech. Hist. p.* 1653.

Esula major Germanica. *Lob. Stirp. Hist.* 194. *Johns. Merc. Bot.* 34.

*Howe, Phyt.* 39. *Park.* 188. *f.* 12. *Merr. Pin.* 37. *Dill. Ind. in Raii Syn.* ad finem.

Esula palustris. *Riv. Tetr. Irr. t.* 116.

Tithymalus palustris fruticosus. *Bauh. Pin.* 292.

β. foliis glabris (non in Anglia observatur).

E. palustris. *Linn. Herb.*; *Fl. Suec.* 163.; *Fl. Dan. t.* 866. (mala). *Svensk Botanik, n.* 329. *Roep. En. Euph.* 62. *Bot. Gal.* 414.

*Anglis.* Water Spurge, Quack-salvers' Turbith.

*Habitat* in umbrosis prope Bath. *Lobel* et *Johnson*; nuper *D^r Simms* et *Gibbes.*

In the specific character I have left out "ramis sterilibus," though inserted by Linnæus, because barren branches occur in other perennial *Euphorbiæ,* and in *E. emarginata* they assume the same proliferous habit.

In Jacquin's *Observationes Botanicæ* in his *Miscellanea Austriaca, Euphorbia palustris* is very fully described, particularly mentioning the scattered hairs on the stems, the lanceolate-oblong leaves, sharply serrated at the ends, and generally covered with short hairs, yet sometimes smooth on the upper surface, and the capsules warty and hairy. This description, which agrees in every respect with our Bath plant, is abridged in Host's *Synopsis,* still pointing out the hairiness: in the *Svensk Botanik* it is figured quite smooth. It appears probable, therefore, that the variety β grows in Sweden and Denmark, and is not known in Great Britain.

Most authors state the *E. palustris* as growing in wet places; and so does Gmelin with regard to his plant. Yet here, again, there is ancient authority for situations somewhat like ours near Bath: "Reperitur major in collibus quibusdam Germaniæ in apricis circa Staphusiam et Basileam, in Apuliæ quoque Gargano monte, Matthiolo teste." Dodoens, *Purgantium Libri.* Lyte in his translation of Dodoens's Herbal says, "The great *Esula* in some countries groweth in wooddes and wildernes, and in this country in the gardens of herbarists." Nor is modern and better testimony wanting; for in *Jacq. Misc.* it is said to grow "non tantum in paludosis locis demissis sed etiam in Austriæ alpe Etschero crescit:" and in Host's *Syn.* "in palustribus Austriæ, Pannoniæ, et in editissimo Austriæ monte Oetscherberg."

Always maintaining that the modern practice of consolidating the synonyms

of plants which had previously been considered distinct by eminent botanical authors, without marking them with the usual Greek characters, is uncourteous and tending to great confusion, I insert the *E. palustris* of the Linnæan Herbarium as a variety. I am not sufficiently acquainted with *E. procera* and *villosa* to be able to judge whether they should also be so considered.

The restoration of this Spurge to a place in the British Flora fully vindicates the accuracy of Lobel, who has been accused of noting plants as English on insufficient authority. He perhaps discovered it when on a visit to his friend Edward Saint Loo, who resided in Somersetshire, and was much attached to the study of botany. That it has a right to be so ranked, after an abode of nearly three centuries, the most sceptical must allow, even though it might have escaped from the neighbouring grounds of the Prior of Bath, or from the physic gardens of the herbarists of that city.